

Conifers of Montana

Montana Field Guide

Note

These PDF versions of the Montana Field Guide are intended to assist in offline identification and field work. They are not intended to replace the live Field Guide, as that version contains more information and is updated daily.

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For the most up to date information of Montana species, please visit <http://FieldGuide.mt.gov>

Grand Fir - *Abies grandis*

http://FieldGuide.mt.gov/detail_PGPIN01060.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Tree up to ca. 50 m tall with a conical crown and branches that bend down and then out. Bark gray with reddish furrows, becoming brown in older trees. Leaves 2–4 cm long, blunt-tipped, borne in a single plane opposite each other on the twigs, erect. Stomates on underside only. Seed cones usually green, 6–11 cm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forest; montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Subalpine Fir - *Abies lasiocarpa*

http://FieldGuide.mt.gov/detail_PGPIN01070.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Generally a small tree up to ca. 30 m tall with a narrow crown. Bark gray but splitting to reveal a brownish layer beneath. Leaves 1–3 cm long, turned upward, blunt-tipped except on cone-bearing branches. Stomates on both surfaces. Seed cones deep blue, 3–8 cm long. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forests; montane to treeline (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Common Juniper - *Juniperus communis*

http://FieldGuide.mt.gov/detail_PGCUP05030.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Rounded shrub with prostrate to erect stems up to 1 m. Bark brown, fibrous. Leaves stiff, needle-like, 5–20 mm long, whitish on lower surface, in whorls of 3, jointed where they meet the stem. Seed cones maturing in 2 years, bluish-black, 4–7 mm long, seeds 2 to 3 (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Drier forests, forest margins, open slopes, outcrops and rock slides at all but the highest elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Creeping Juniper - *Juniperus horizontalis*

http://FieldGuide.mt.gov/detail_PGCUP05070.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

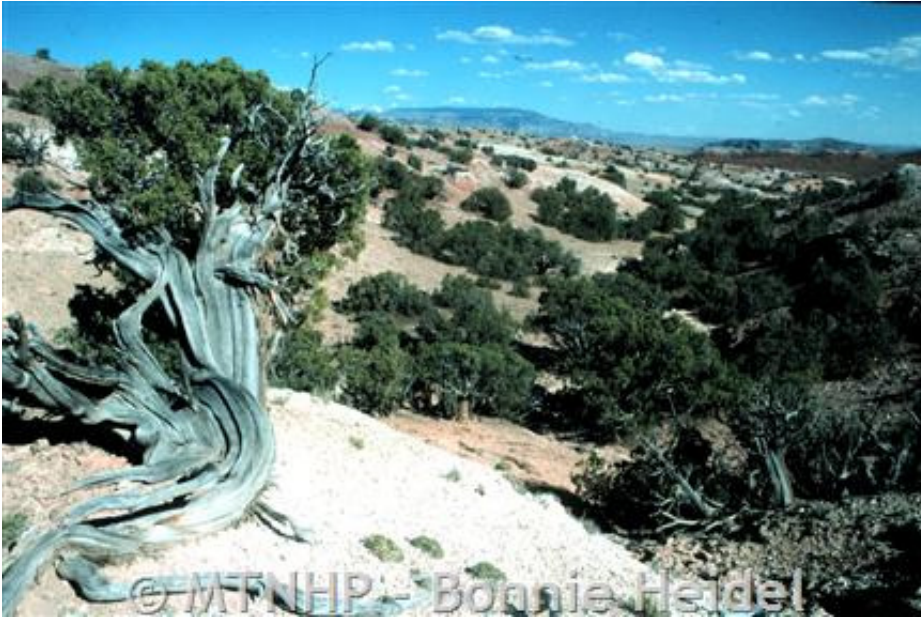
Creeping juniper grows along the ground in dense mats no more than 2 feet tall and 4-8 feet wide. The peeling, reddish brown bark is obscured by the thick overlapping mat of branches. The evergreen leaves are mostly scale-like and pressed close to the branches but needle-like leaves can also be found as in other junipers. Obscure flowers produce blue, berry-like cones containing 3-5 seeds.

Habitat

Sandy prairie, old gravel bars, limestone outcrops; plains, valleys, montane, rarely up to treeline (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Utah Juniper - *Juniperus osteosperma*

http://FieldGuide.mt.gov/detail_PGCUP050A0.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Erect shrub or small tree up to 6 m with stringy, grey-brown bark and spreading or ascending branches. Leaves opposite or in whorls of 3, scale-like, 1–2 mm long, yellowish with denticulate margins; juvenile leaves needle-like, 3–5 mm long. Seed cones maturing in 1 to 2 years, 1-seeded, blue-brown, 6–8 mm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Limestone or calcareous sandstone outcrops, slopes and ridges; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Rocky Mountain Juniper - *Juniperus scopulorum*

http://FieldGuide.mt.gov/detail_PGCUP050C0.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Erect shrub or small tree up to ca. 6 m with ascending branches and a conical crown. Bark stringy, reddish-brown. Leaves green but often with a whitish, glaucous coat, opposite, scale-like, appressed, 1–2 mm long, entire-margined with an acute but not apiculate tip; juvenile leaves needle-like, 2–6 mm long and ascending. Seed cones with 1 to 2 seeds, blue with glaucous bloom, 3–6 mm long, maturing in 2 years (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Stream terraces, open Douglas-fir or ponderosa pine forest, and rocky or barren slopes; plains, valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Alpine Larch - *Larix lyallii*

http://FieldGuide.mt.gov/detail_PGPIN02030.aspx



Global Rank: G4G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Small trees to 20 m tall with open, often asymmetrical crowns. Bark covered with red- to purple-brown flakes. Leaves up to 40 per spur, 4-angled, 1–3 cm long. Seed cones 30–45 mm long, yellow to purplish-green (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Near treeline where snow lies late in areas with stony soil derived from non-calcareous parent material. Usually the dominant tree where it occurs, forming open woodlands, often with an understory of ericaceous shrubs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Larch - *Larix occidentalis*

http://FieldGuide.mt.gov/detail_PGPIN02040.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Large trees to 60 m; older trees without branches for most of their height. Bark of mature trees thick, deeply furrowed, covered with cinnamon-colored plates. Leaves 15 to 30 per spur, 2–5 cm long, 3-angled. Seed cones brown to reddish, 25–40 mm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forests, especially on cool slopes; valleys to lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Engelmann Spruce - *Picea engelmannii*

http://FieldGuide.mt.gov/detail_PGPIN03030.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Trees up to ca. 50 m tall with narrow, spire-like crowns. Bark gray to reddish brown. Leaves blue-green, 1–2 cm long. Seed cones 3–6 cm long, yellow- to purple-brown. Scales widest above middle with wavy margins along the tip (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forests, often along streams, wetlands; valleys to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

White Spruce - *Picea glauca*

http://FieldGuide.mt.gov/detail_PGPIN03040.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Small tree to 30 m tall with a conical crown. Bark gray-brown. Leaves 1–2 cm long. Seed cones 25–60 mm long. Scales fan-shaped, widest near the entire-margined tip (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Forests, often along streams; montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Whitebark Pine - *Pinus albicaulis*

http://FieldGuide.mt.gov/detail_PGPIN04010.aspx



Species of Concern

Global Rank: G3G4
State Rank: S3

AGENCY STATUS
USFWS: C
USFS: SENSITIVE
BLM:

Number of Observations: 2

General Description

Small tree to 25 m tall with ascending branches and a rounded or flat-topped crown. Bark smooth, light gray. Leaves yellow-green, 2–6 cm long, 5 per fascicle. Seed cones ovoid, 4–8 cm long, remaining on the tree and closed until opened and/or dislodged by squirrels or birds. Scales thin at the base but thickened toward the tip. Seeds wingless, 7–11 mm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Subalpine and krummholtz habitats in most mountain ranges.

Lodgepole Pine - *Pinus contorta*

http://FieldGuide.mt.gov/detail_PGPIN04080.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Small, slender tree to 35 m with whorled horizontal branches forming a conical crown. Bark thin, scaly, brown or gray. Leaves yellow-green, 4–8 cm long, 2 per fascicle. Seed cones ovoid but asymmetrical, 2–6 cm long. Scales tongue-shaped with a spine tip. Seeds with a conspicuous wing. Our plants are variety latifolia (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

In mixed or nearly pure forest stands; valleys to treeline (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Limber Pine - *Pinus flexilis*

http://FieldGuide.mt.gov/detail_PGPIN040F0.aspx



Global Rank: G4
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Small tree to 15 m tall, very similar to *P. albicaulis*. Leaves green, 5 per fascicle, 3–7 cm long. Seed cones ovoid, 7–14 cm long, falling shortly after opening. Scales rhombic, thinner towards the tip. Seeds 10–15 mm long, wingless (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Rocky slopes and ridges; montane, occasionally subalpine, rarely plains and valleys (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western White Pine - *Pinus monticola*

http://FieldGuide.mt.gov/detail_PGPIN040M0.aspx



Status Under Review

Global Rank: G4G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Large tree to 60 m tall with a conical to rounded crown. Bark thin, smooth at first, becoming scaly with age. Leaves light blue-green, 4–10 cm long, 5 per fascicle, the tips denticulate. Seed cones narrowly elliptic, 15–25 cm long; scales thin, tongue-shaped. Seeds with conspicuous wings (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Mesic montane forests of western Montana.

Ponderosa Pine - *Pinus ponderosa*

http://FieldGuide.mt.gov/detail_PGPIN040S0.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Large trees to 65 m tall with an open, rounded crown and spreading branches. Bark of old trees thick, furrowed, covered with scales that resemble pieces of a jigsaw puzzle. Leaves yellow-green, 7–25 cm long, 2–3 per fascicle, clustered on branch ends. Seed cones broadly ovoid, 7–15 cm long. Scales thick with a terminal prickle. Seeds with a conspicuous wing. Our plants are var. *scopulorum* (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Drier forests as well as rocky exposures (especially sandstone) associated with grasslands; plains, valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Douglas-fir - *Pseudotsuga menziesii*

http://FieldGuide.mt.gov/detail_PGPIN05020.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Evergreen trees up to 60 m tall with spreading branches and narrow to broadly conical crowns. Bark of older trees thick, furrowed and gray with reddish brown between furrows. Leaves yellow- to blue-green, single, spirally arranged and spreading, 15–25 mm long, stomates lacking on upper surface. Leaf buds conical. Seed cones narrowly ellipsoidal, 3–6 cm long, maturing the first season and shed entire. Scales broadly rhombic, stiff, pubescent, subtended by a longer 3-lobed bract. Seeds winged. Our plants are var. *glauca* (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry to mesic forests; valleys to subalpine and on the plains along the Missouri River (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Pacific Yew - *Taxus brevifolia*

http://FieldGuide.mt.gov/detail_PGTXA01010.aspx



Global Rank: G4G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Dioecious, evergreen shrub or small tree to 10 m tall with spreading or drooping branches forming an open, conical crown. Bark thin and brown or purplish. Leaves sharp-pointed, yellow-green above, paler beneath, 12–20 mm long, single but borne opposite each other in a single plane. Pollen cones solitary, globose, 2–3 mm long. Seed cones reduced to a single seed surrounded by a red, fleshy, pea-size, berry-like aril ca. 8 mm across. Seed 5–6 mm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet forest; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Redcedar - *Thuja plicata*

http://FieldGuide.mt.gov/detail_PGCUP06030.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Large evergreen trees to 60 m tall with reddish-brown, fibrous bark and a conical crown, monoecious. Lower trunk of older trees broad and often buttressed. Branchlets pendant, arrayed in flat sprays. Leaves glossy green, scale-like, opposite, overlapping, appressed against the flattened twigs. Pollen cones 1–3 mm long, reddish. Seed cones ellipsoid, 8–12 mm long, with 4 to 6 pairs of woody, overlapping scales, the top and bottom pairs sterile, maturing the first summer. Fertile scales with 2 seeds each (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forest, especially along streams; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Hemlock - *Tsuga heterophylla*

http://FieldGuide.mt.gov/detail_PGPIN06030.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Medium-size trees to 60 m tall with a narrow crown and drooping leader. Bark brown, thin, scaly. Leaves flattened, shiny yellow-green above with broad, white stomatal bands below, 8–15 mm long, borne in a single plane or nearly so. Seed cones green to brown with age, narrowly ellipsoid, 15–30 mm long. Scales oblong-ovoid (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Mesic to wet forests; valleys to montane; collected in Flathead and Lake counties (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Mountain Hemlock - *Tsuga mertensiana*

http://FieldGuide.mt.gov/detail_PGPIN06040.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Small to medium-size trees to 45 m tall with a narrow crown and slightly drooping leader. Bark grey to reddish brown and deeply fissured. Leaves somewhat thickened, whitish on both surfaces, yellow- to blue-green, 12–20 mm long, surrounding the stems or upturned. Seed cones purple, 25–60 mm long, nearly linear. Scales fan-shaped, as broad as long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Forests in regions of heavy snowfall; subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).
